

CLAIMS

1. An optical device having a back facet and a front facet opposite to each other, said device including:

5 - a laser adapted to emit light essentially perpendicular to said back facet;

- a modulator having an input end and an output end, respectively, and adapted to receive and modulate light emitted from said laser and to output modulated light at said modulator output end; and

10 - a window region arranged between said modulator output end and said device front facet;

- said device being further arranged such that modulated light output from said modulator is transmitted through said window region and is output from said device through said front facet, wherein

15 - said modulator is bent such that the modulated light output from said modulator is propagating essentially in a direction, which is angled with respect to the normal of said front facet.

20 2. The optical device as claimed in claim 1 wherein the angle between the propagation direction of the light and the normal of said front facet is at least 2°, preferably at least 5°, more preferably at least 8°, and most preferably around 8°.

3. The optical device as claimed in claim 1 wherein said modulator output end is tapered.

25 4. The optical device as claimed in claim 3 wherein the width of said modulator output end is tapered.

5. The optical device as claimed in claim 3 wherein the thickness of said modulator output end is tapered.

[illegible]

16. The optical module as claimed in claim 15 wherein said angle with respect to the normal of the optical device front

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- 5 17. The optical module as claimed in claim 15 wherein said out-coupling device comprises a lens and/or an optical isolator.
18. An optical module comprising the optical device as claimed in claim 12, and an out-coupling device.
19. An optical device having a back facet and a front facet opposite to each other, said device including:
- 10 - a laser adapted to emit light;
- a modulator having an input end and an output end, respectively, and adapted to receive and modulate light emitted from said laser and to output modulated light at said modulator
- 15 output end; and
- a window region arranged between said modulator output end and said device front facet;
- said device being further arranged such that modulated light output from said modulator is transmitted through said window
- 20 region and is output from said device through said device front facet, wherein
- said device is arranged such that the modulated light output from said modulator is propagating essentially in a direction, which is angled with respect to the normal of said device front
- 25 facet; and
- said modulator output end is tapered.
- 20 The optical device as claimed in claim 19 wherein the angle between the propagation direction of the light and the normal of

[illegible]

5 22. The optical device as claimed in claim 19 wherein the
thickness of said modulator output end is tapered.

10 24. The optical device as claimed in claim 19 wherein said front
facet is provided with an AR coating.

26. The optical device as claimed in claim 19 wherein said
15 modulator is bent.

28. The optical device as claimed in claim 19 wherein said front
20 facet is angled with respect to said back facet.

- providing a substrate having a back facet and a front facet opposite to each other;

25 - forming a laser in or on said substrate, said laser being adapted to emit light essentially perpendicular to said back facet;



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- forming the substrate, the laser, the modulator and the window region such that the modulated light output from said modulator is propagating essentially in a direction, which is

angled with respect to the normal of said device front facet;
and

- forming the modulator output end tapered.

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